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ABSTRACT

The relationship between delinquency and school climate is defined as the aggregate-belief-value characteristics of the people who make up the school. This relationship was investigated to determine if an aggregate measure of student attitudes about school, as measured by the Quality of School Life Scale (QSL), can be used as a measure of the school's own characteristics. Subjects were 2,184 students enrolled in eighth grade during the spring of 1978. Multiple regression procedures were used to test the effect of student background characteristics on QSL scores, partial out those effects, and then test the independent contribution of school membership. Results indicated that the QSL: (1) measures both school characteristics and student attitudes; (2) is a fair measure of student affective responses to school; and (3) affects both the Scold and Unobtrusiveness behavior analysis scales. (Author/HLM)

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Delinquency in a Seventh-Grade Cohort: Impact of School Climate on Problem Behavior

Prepared for the Symposium

The Quality of School Life: A New Direction for Evaluation

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A great deal of recent writing on crime and delinquency suggests the school is very important in the etiology of delinquent behavior. However, the exact nature of the school's role is unclear. The 1973 National Advisory Commission on Criminal Justice Standards and Goals concluded that: "Among the limitations in developing recommendations to improve the educational system is the absence of direct, objective evidence to document causal relationships between characteristics of criminal offenders and variables in the schools' policies, procedures, and practices" (1973, p. 142). A few researchers have found that delinquent behavior among some youths who dropped out of school was greater while they were in school than after they left (Bachman, Green & Wirtanen, 1971; Elliott, 1966; Elliott & Voss, 1974). This finding led Elliott & Voss to conclude that delinquency leads to drop-out which leads to decreasing delinquency and that "...the school is the critical generating milieu for delinquency" (p. 203). But characteristics of the school itself which lead to increased amounts of delinquent behavior are still not known.

The issue is confounded by the fact that a great deal of the research on the relationship between the school and delinquency has focused on academic achievement. There is a growing body of evidence that suggests a relationship between delinquency and school failure (Glueck & Glueck, 1950; Gold, 1970; Hirschi, 1969; Schafer & Polk, 1967; Wolfgang, Figlio & Sellin, 1972) and it has become accepted that academic achievement and delinquency are correlated (see Silberberg & Silberberg, 1971 and Hirschi & Hindelang, 1977 for a review of this literature). However, McPartland and McDill (1977) found that when student background characteristics as ability level, parents' education, family size and material wealth were controlled,

academic achievement was only modestly related to delinquency. They stated that "...the small percentage of variance in delinquency that is explained by our school measures does suggest that most of the causes lie in unmeasured family, occupational, and societal factors" (p. 15). Other authors (Polk, 1975; Polk and Schafer, 1972) have also argued that the impact of the school on delinquency is through academic performance, and that academic performance is related to prior family support conditions. Furthermore, academic achievement itself has not been shown to be highly related to secondary school characteristics such as racial balance, number of families represented at a typical PTA meeting, number of volumes in the school library, per pupil expenditures or teacher verbal ability (Coleman et al., 1966) or to university characteristics like selectivity, per-student expenditures, and faculty-student ratio (Astin, 1968). For academic achievement at least, it is almost as if the "school" is a constant in delinquency causation, i.e., the variability among schools once student characteristics are controlled is negligible and the school only provides the setting within which academic achievement affects behavior.

Notwithstanding these relatively unencouraging research findings, there is a growing speculation that there are characteristics of the school itself that contribute at least to school violence, if not delinquency in general. McPartland and McDill (1977) suggested the utility of investigating schools' "responsiveness" to student behavior; they suggested that sanctions associated with positive and negative student behavior and the extent of student participation in decision-making would be associated with school violence. Unfortunately their research utilized grades and grade point average as measures of school experience. They did not assess variation in "school

responsiveness". Similarly, the National Institute of Education, in its Safe School Study (1977) included four broad categories of school variables in its hypothesized model of school crime. These categories of variables included physical structure, social structure, school function, and school climate. Physical structure referred to variables as characteristics of the building and grounds and crime prevention devices. The social structure was subdivided into composition of students and staff, social relations or intergroup tension among students, and power relations between students and administration. School function was defined as the amount of importance attributed to instruction, socialization, custody-control, evaluation-certification, and selection. School climate was defined as "...simply the aggregate-belief-value characteristics of the people who make up the school" (p. D-16).

It is in this last category, "school climate", that we have focused our research for this presentation. We have attempted to measure the "aggregate-belief-value characteristics" of students with the Quality of School Life Scale (QSL; Epstein & McPartland, 1976) and we have focused on two major issues surrounding the use of the QSL as a measure of school climate: (1) Does the QSL measure something about schools which is independent of students' background and personality, i.e., something other than a generalized attitude toward all schools? (2) Does the QSL contribute to an explanation of variation in student behavior, including delinquency?

Control Variables

Before one can adequately test for the importance of school factors as contributors to delinquency, you need to control for characteristics of students that vary from one school to the next, i.e., what the students

"bring to" the school. Literally volumes of studies have demonstrated differences between delinquents and nondelinquents, and some of these factors, such as personality subtype, may contribute both to perceptions of school and to delinquency. If such factors can be assumed to operate causally prior to school factors and if they are not evenly distributed among schools, then they must be controlled for in any attempt to partial out the independent effects of school climate.

Fortunately, there has been a fair degree of agreement in previous research findings about contributory factors. There appear to be at least three major sets of variables that describe somewhat independent links in the causal processes leading to delinquency. These variables, which can be presumed to be causally prior to school factors, include socio-demographic processes, family environment, and personality. Each is briefly discussed below in an hypothesized temporal order.

As the first element, the repeated finding that age and sex are highly related to delinquency suggests the possibility of some very fundamental biological links to delinquency. Delinquency peaks at age 16 and is most predominant among males. Although biological-genetic determinants of delinquency may ultimately be shown to explain these basic relationships, the current consensus appears to be that the effects of age and sex are translated into behavior through different socializing practices and opportunities defined by our culture. In addition to age and sex, race and sociceconomic status also define broadly different socializing environments. Opportunities for experiencing success, the learning of different behavioral norms, and the opportunity to observe deviant behavior are all to some extent dependent upon position in the socio-cultural matrix for which age, sex, and socioeconomic status are crude indicators.

A second element in the temporal sequence is family disorganization and disruption. While theorists have differed in the emphasis placed on family environment as a causal factor in delinquency, almost none have totally disregarded it. Malfunctioning families have repeatedly been found to be more likely to produce deviant offspring than have more well-functioning families (cf. Robbins, 1966; Glueck & Glueck, 1950). There has been less agreement about which dimensions of family psycho-social interactions are most crucial. At least two somewhat independent dimensions--attraction (communications, harmony and affection), and structure (supervision, control and discipline) tend to reappear in various studies. Although these variables have been conceptualized quite differently, the instruments (i.e., questionnaire items) used to measure them have shown considerable similarity from study to study.

As a third element, the evidence is overwhelming in pointing to personality-attitudinal differences between delinquents and nondelinquents. Some have argued that these are effects rather than causes of the delinquent behavior. Regardless, it is clear that some personality attributes become stabilized by later childhood, say by age ten; suggesting that personality attributes are precursors to delinquent behavior. There are, for example, wide individual differences in the maturity, and personal adjustment shown by persons of different ages. Some youth are almost totally without personal autonomy in a peer-dominated setting. Others so misperceive the environment that they respond inappropriately in a variety of settings. While the effects of the environment, setting, and situation can never be completely ignored, many personality characteristics shown by the school-age child become sufficiently stable and independent of situational variations to be predictive of future behavior.

The fourth element in this causal process is youths' experiences in school. The research evidence indicates that one of the primary predictors of persistent, chronic delinquency is failure in school. But hard data specifying the nature of the relationship between school experiences and subsequent delinquency are scarce. It remains to be demonstrated whether the schools have an effect in increasing or decreasing the probability of serious delinquency and what the mechanisms for this effect are.

The present research, then, is an attempt to overcome this lack of knowledge about what appears to be a very important element in the etiology of delinquent behavior. The first step is to determine whether an aggregate measure of student attitudes about school can be used as a measure of the characteristics of the school itself. To do this, it will be necessary to control for student background variables which may affect perceptions of school and then see whether meaningful differences on the QSL still exist among students in different schools. The next step is to determine whether the variance in QSL contributes to the explanation of problem behavior and delinquency. To address this question, it will be necessary to control for student background variables and then see if the QSL increases the amount of explained variance in the behavioral measures. Finally, we will look at whether the contribution of QSL to behavior, if any, exhausts the contribution of the school.

Method

Background

On June 16, 1976 the Rosenberg Foundation awarded a grant to the California Youth Authority (CYA) to support a cooperative delinquency prevention research project between the CYA and a local school district. This

district was chosen because researchers from the CYA had previously established a collaborative relationship with staff in the district. This district's geographical area includes approximately 150,000 residents of whom approximately 13,000 are enrolled in the district's five high schools, eight junior high schools, and three alternative schools.

In relation to other school districts throughout the state, the district placed at the 13th percentile on a socioeconomic index, at the 10th percentile on an index of parent education, and at the 39th percentile on measures of twelfth grade student's reading and mathematics achievement. Approximately 14.9% of the students come from families receiving public assistance. There is, however, wide variation in socioeconomic status and achievement test scores among the schools in this district. While the district as a whole has the poorest tax base in the state, one segment of the geographical area is in the 75th percentile statewide for socioeconomic and occupational status, and the district is at the 21st percentile statewide on per pupil expenditures. The latest ethnic survey indicates a student population of White 67.3%, Black 15.9%, Hispanic 11.9%, Asian or Pacific Island 2.2%, American-Indian or Alaskan-Native 2.1%, and Philippino 0.6%. Approximately one-quarter of the students have a parent employed at local military facilities which contributes to the district's transiency rate of approximately 14.2% per year.

Instruments

Although the research project is longitudinal in nature, this report will focus only on data collected in the spring of 1978. At that time, a questionnaire was administered to all of the eighth-grade students in the district. The questionnaire was divided into three segments with each

segment given on a separate day. The first segment included the short form of the Behavior Checklist (BCL) (Jesness, 1975) which is a 30-item self-report of non-intellectual, non-cognitive social behaviors; the QSL; a Teacher Scold Scale (Scold) (adapted from Epstein & McPartland, 1975), and other items designed to measure additional school experiences and attitudes.

The second segment of the questionnaire consisted of the Jesness Inventory (JI) (Jesness, 1962, 1966) which consists of 155 true-false items designed to measure the reactions of young people to a wide range of content. One use of the inventory is as a measure of the student's interpersonal maturity level subtype (Jesness, 1974). The I-level is described as a perceptual frame of reference by which the individual integrates his/her experiences. "Each new level of integration may be regarded as the psychological analogue of an increasingly efficient optical lens. The more advanced the sequence of integration the less the likelihood of perceptual distortion. The person can see himself and the world more accurately and can operate more effectively" (Sullivan, Grant & Grant, 1957, p. 2). The Jesness Inventory categorizes respondents into one of three maturity levels and nine subtypes.

The Jesness Inventory also provides scores on 11 personality characteristics. Three of the 11 scales were derived from an item analysis with criterion reference groups and seven scales were generated from cluster analyses. For the present purposes only the Social Maladjustment Scale (SM) was used. Social Maladjustment is defined as the extent to which the individual shares attitudes expressed by persons who show an inability to meet, in socially approved ways, the demands of living. This scale was developed from item differences between delinquents and nondelinquents.

The third segment of the questionnaire contained a 14-item self-reported delinquency scale (SRD) with items which range in seriousness from skipping

school to grand theft and extortion. These items were all taken from previous research conducted by Hirschi (1968), Gold (1970), and Jesness, et al. (1975), and the score was the simple sum of the frequencies of delinquent acts within the past year. The third questionnaire segment also included a Family Communication and Supervision Scale (FCS) which consisted of nine items such as parents' knowledge of whereabouts, number of definite rules at home, participation in family decision making, and willingness of parents to explain rules. This scale was developed from factor analyses of a larger number of items collected during previous administrations of the questionnaire. The scale score was the simple sum of the nine items scored in the theoretically positive direction.

Measures of academic achievement were obtained from district files for fall and spring district-wide testing with the Comprehensive Test of Basic Skills (CTBS, 1970) which assesses three major academic areas (reading, language, and arithmetic). For the purposes of this project, the grade-equivalent score was averaged across all subtests, or those that were available, to create a single score as a measure of academic achievement. A measure of the number of times a student was sent to the vice-principal's office for disciplinary action was also collected. Each time a student was referred, the vice-principal was requested to fill out a card that described the location, the behavior, and the action taken. These referral cards were collected throughout the year by project staff.

Procedures and Subjects

The questionnaires were administered by classroom teachers to their classes on three separate days. Parental consent had been obtained prior to giving the questionnaires and, before the survey was given, the students were also informed of the purpose of the testing, assured of confidentiality,

and their consent was obtained. The teacher read two of the three questionnaire segments aloud in order to control for reading ability differences among the students. The other segment, containing the Jesness Inventory, was administered with a tape recorder.

There were 2,184 students enrolled in eighth grade during the spring of 1978. Usable questionnaires were obtained from 79.1% of the students for the first segment, 77.7% for the second, and 77.6% for the third. Of the total enrollment, 3.5% were not tested due to parental refusal.

Results and Discussion

This section will first present background characteristics of the cohort, grouped by school, and then turn to an examination of the two major questions: (1) Does the QSL measure something independent of student background? and (2) Does school climate contribute to student behavior?

Table 1 presents background characteristics of the cohort by school. There is considerable variation in the ethnic composition of the school student bodies, substantial differences in family educational background, and somewhat smaller differences in transiency. Table 2 shows student body differences on personality subtype, Social Maladjustment, Family Communication and Supervision, academic achievement, and Quality of School Life. As an aggregate score, there were differences among those schools on the QSL ($F = 18.73$, $df = 8/1590$, $p < .01$) and, in the case of school F, these differences were substantial.

School I is an alternative school which only receives students from the eight other regular junior high schools. These students are selected almost exclusively because they have been in trouble in their regular schools. They have been referred to vice-principals for disciplinary

reasons more often than other students, they report being scolded in class more frequently, and their self-reported delinquency is greater. School I had an enrollment of 51 students during the spring testing and fewer than half completed any portion of the three-part questionnaire. For these reasons, school I was dropped from the analyses of school environment.

Analysis of the Quality of School Life Scale

Multiple regression procedures were used to test the effect of student background characteristics on QSL scores, partial out those effects, and then test the independent contribution of school membership. The hierarchical decomposition method assumes causal order in the step-by-step sequence of variable entry. This method tests for the total influence of a given variable adjusted only for those variables that precede it in the hierarchy.

Table 3 presents the results of the regression analysis on QSL. Each of the background variables except sex and academic achievement made statistically significant contributions to the QSL score. The most important were personality subtype, Social Maladjustment, and Family Communication and Supervision. They contributed 13%, 10%, and 5% of the variance in QSL, respectively. When all of the background variables were controlled for, the school attended contributed an additional 6% to QSL variance. All of these variables together generated an $R^2 = .36$.

Obviously we have not measured every personality and attitudinal domain which might contribute to QSL. Note that 64% of the variance is left unexplained. But the school factor, representing unmeasured variation in practices, policies, and procedures, does contribute to QSL independently of demographic and personality measures. This does suggest that QSL is measuring something about the school itself as opposed to measuring only some attribute of the students.

Schools' Contribution to Behavior

Four measures of student behavior are presented in the following analyses. They are Unobtrusiveness, Scold, number of disciplinary referrals and self-reported delinquency. Table 4 presents means and standard deviations for these measures by school. The zero-order correlations of QSL with these measures was .43, -.45, -.15, and -.39 respectively. The question for the following analyses was: What is the contribution of QSL to student behavior once the variance attributable to theoretically causally prior variables has been partitioned out?

In the first analysis, Unobtrusiveness--a self-reported measure of non-cognitive behaviors such as interrupting others, horseplay, and loud and boisterous behavior--was the dependent variable in the hierarchical regression analysis. Table 5 presents those results. Each of the background variables contributed to the variance in Unobtrusiveness with personality subtype (11%) and Social Maladjustment (11%) being the most important. When the background variables are controlled, QSL adds an additional 3% to the variance. Adding the school after QSL does not make any additional contribution; that is, knowledge of which school a student is in does not aid in predicting the Unobtrusiveness score suggesting that the QSL is reflecting whatever it is about the school that is conducive to Obtrusive behaviors.

Table 6 presents the results of the same analysis using Scold, a self-reported measure of the number of times the student has been scolded by teachers during the past year. The background variables accounted for 25% of the variance in Scold with personality subtype (8%) and Social Maladjustment (7%) again being the most important. When added to the regression, QSL contributed an additional 6% to the variance. Evidently the QSL is

reflecting differences among student experience, but it does not exhaust all of the "school" contributions. Adding the school as the final step increased the R^2 by a small (1.5%) but statistically significant amount.

The number of times that a student had been referred to the vice-principal for disciplinary reasons was the dependent variable for the next analyses. There was considerable variation in the extent to which students were referred to vice-principals for disciplinary purposes among these schools; the percentage of students referred one or more times ranged from 4.5% to 45.6%. There was also considerable variation in the quality of disciplinary records kept in these schools. This wide variation suggests perhaps that disciplinary referrals may be more a reflection of school policies than of student behavior.

Table 7 presents the regression analyses for disciplinary referrals. For this measure, personality subtype, academic achievement, and race were the most important background variables with each contributing 2 to 3% to the variance. QSL made a statistically significant but practically meaningless (less than 1%) contribution to this crude behavioral measure, and that the school accounted for 4% of the variance when entered into the equation after all of the background variables and QSL had been partitioned out. There apparently are differences between schools in policies regarding disciplinary referrals and those differences are not reflected very well by the QSL scale.

Table 8 presents the results of the regression analyses for self-reported delinquency. Once again personality subtype and Social Maladjustment were the most important background variables, explaining 14 and 10% of the variance respectively even after sex, race and education of the family head

had been partitioned out. Family Communication and Supervision contributed an additional 3% to SRD but academic achievement was of no importance. Once the background variables were partitioned out, QSL added an additional 1% to the variance.

For the purposes of this research, it had been assumed that Unobtrusiveness, Scold, and disciplinary referrals would be indicators of problem behavior in school--problems that are precursors of delinquency. Since these variables are hypothesized to be affected by the background variables and QSL, they were entered into the regression of SRD after the background variables and QSL and school. Unobtrusiveness and Scold were both substantially related to SRD. Unobtrusiveness contributed an additional 4.5% ($F = 74.5$, $p < .01$) to the variance in SRD and Scold contributed another 4.8% ($F = 80.5$, $p < .01$). The number of disciplinary referrals made no further contribution (R^2 change = .006). All of these variables combined accounted for nearly half the variance in self-reported delinquency ($R^2 = .47$).

Discussion

The major questions for this research report were: Does the QSL measure something about schools which is independent of students' background and personality, and does the QSL help explain student problem behavior and delinquency? It appears that the QSL does reflect a set of perceptions toward school which are above and beyond idiosyncratic interpretations of the world in general. A review of Tables 5 and 6 shows that, once the background variables of sex through academic achievement are partialed out, QSL makes a theoretically meaningful contribution to the variance in Unobtrusiveness and Scold. (For review of the regression analyses, we decided that a predictor variable must contribute at least 2% to the variance of a

dependent variable to be of any theoretical importance.) These two scales represent the most frequently occurring classroom misbehaviors and teacher reaction (the zero-order correlation is -.58). Adding the school after QSL did not increase the $\underline{R}^2$.

So the QSL seems to be a fair measure of student affective response to the school. While the present research cannot demonstrate the temporal ordering of these variables, it seems reasonable to assume that disliking school and teachers and lacking a commitment to school work are precursors to classroom misbehavior which leads to teacher scolding. Also note that one can be scolded for low academic achievement, as well as non-cognitive behavior. The measure of academic achievement contributed to the variance in Scold, but it did not contribute to the variance in QSL or Unobtrusiveness.

While the QSL did contribute to Unobtrusiveness, it did not contribute to the number of referrals to vice-principals for disciplinary reasons. The school factor, however, did help to explain this measure. It is very probable that disciplinary referral is a matter of institutional policy. There are referral rate differences among these eight junior high schools even after student body characteristics of parents' education and student personality and achievement are controlled. But the QSL does not reflect this level of school policy. QSL seems more a measure of individual student and teacher interaction than global institutional differences, at least as they are reflected in disciplinary practices.

Finally, neither QSL nor the school factor made a theoretically meaningful contribution to self-reported delinquency. But Scold and Unobtrusiveness did, and QSL affected both. This suggests that attitudes toward school precedes minor misbehavior and teacher reactions which both precede more serious acts of delinquency. In this sense, attitudes toward school affects delinquency indirectly through variables that are more proximal.

In summary, the QSL appears to measure some component of students' attitude toward school which is independent of other personality and background factors. Since academic achievement did not contribute to QSL but since the QSL contributes to Scold, it seems reasonable to interpret the QSL as a measure of affective reaction to school. It should be a useful tool for evaluating affective goals of various school programs. But the QSL does not seem to be useful for the purpose of determining the effect of school climate on delinquency, at least not as an indicator of school policies or practices.

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Table 1

Eighth Grade Student Body Characteristics by School

Characteristic	School								
	A	B	C	D	E	F	G	H	I
Size	289	203	280	445	223	321	235	137	51
Sex:									
(% Male)	46.0	46.7	54.1	51.9	53.5	54.5	51.8	52.9	42.9
Race:									
% Amer.-Indian	3.6	3.1	2.0	3.9	4.0	7.5	4.5	5.0	28.6
% Asian	1.2	0.5	6.4	1.3	0.4	0.6	3.2	2.9	0.0
% Black	13.1	41.6	17.6	6.7	34.5	1.2	6.4	3.6	21.4
% Mexican-Amer.	9.9	11.7	9.5	5.8	19.9	9.3	38.2	11.4	17.9
% White	63.9	31.8	57.1	70.3	31.9	73.2	39.5	62.9	32.1
% Other	8.3	8.4	7.4	12.1	9.3	8.1	8.2	14.3	0.0
Education of Family Head:									
% Some H.S.	17.7	15.2	12.8	8.4	19.3	28.5	24.5	23.8	37.5
% H.S. Graduate	22.1	29.1	22.8	21.0	30.7	35.8	27.7	29.5	43.8
% Trade School	9.7	7.9	8.8	8.6	6.0	6.5	3.9	7.6	0.0
% Some College	17.7	17.9	24.8	21.9	19.3	10.4	20.6	14.3	12.5
% College Graduate	32.7	29.8	30.8	40.1	24.7	18.8	23.2	24.8	6.3
Transiency:[a]									
% Transient	14.4	14.3	13.4	18.1	14.1	12.3	12.8	11.6	0.0

[a]Transiency was defined as the number of students moving in or out of the district (not intradistrict) divided by the total number enrolled during the academic year. School I only received students from intradistrict transfers.

Table 2

Scale Results by School

Scale	School A	B	C	D	E	F	G	H	I
Personality Subtype:									
% AA	0.9	3.2	0.8	0.9	0.0	5.9	2.5	0.0	11.5
% AP	2.3	5.7	3.1	0.9	3.7	3.3	0.6	1.0	0.0
% CFM	5.9	15.9	6.6	7.0	16.1	4.8	8.8	9.6	0.0
% CFC	12.8	12.7	10.5	11.7	18.6	15.2	20.0	17.3	38.5
% MP	11.0	19.7	8.5	7.0	18.6	10.4	8.1	16.3	26.9
% NA	35.2	26.1	48.8	48.4	26.1	47.6	40.0	36.5	19.2
% NX	23.7	14.0	15.1	14.0	11.8	7.8	13.1	13.5	3.8
% SE	5.0	1.9	4.3	7.6	1.2	3.7	3.8	2.9	0.0
% CI	3.2	0.6	2.3	2.6	3.7	1.1	3.1	2.9	0.0
Soc. Mal.:									
$\bar{X}$	55.0	59.9	54.8	53.6	56.4	59.4	55.1	54.9	69.1
S.D.	10.2	10.9	10.7	10.9	9.6	10.8	9.9	10.9	10.5
Fam. Com. & Sup.:									
$\bar{X}$	26.9	26.5	27.0	27.4	27.1	26.0	26.4	27.1	24.2
S.D.	4.0	4.5	4.3	4.3	4.3	4.3	4.0	4.0	3.5
CTBS: Fall Av.									
$\bar{X}$	7.8	5.9	8.5	8.6	6.4	7.5	7.0	7.8	5.2
S.D.	2.5	2.3	2.5	2.4	2.4	2.4	2.6	2.6	2.0
QSL: Total									
$\bar{X}$	12.8	13.4	13.0	13.3	15.5	8.3	11.9	12.3	12.0
S.D.	7.1	6.2	6.7	7.2	6.3	5.8	6.6	6.7	4.2

Table 3

Summary Table for Regression of QSL

Variable	Multiple R	R^2	R^2 Change	F[e]	% of Explained Variance
Sex[a]	.0204	.0004	.0004	0.67	n.s.
Race[b]	.1126	.0127	.0123	4.10**	3.4
Ed. Fam. Hd.	.1384	.0192	.0065	10.83**	1.8
Personality Subtype[c]	.3851	.1483	.1291	26.90**	36.1
Soc. Mal.	.4996	.2496	.1013	168.83**	28.3
Fam. Com. & Sup.	.5468	.2990	.0494	82.33**	13.8
CTBS: Fall Av.	.5468	.2990	.0000	.00	n.s.
School[d]	.5984	.3581	.0591	14.07**	16.5

Note: The F's are based on the hierarchical decomposition method, i.e., the variables are tested in an assumed causal sequence. Any shared variance among variables is assigned to the prior variable in the hierarchy.

[a,b,c,d] These variables are dummy variables with k = 1, 5, 8, 7.

[e] $F = R^2$ change/k ÷ $(1-R^2_{total})$/N-k-1; N = 1128.

** $p \leq .01$.

Table 4

Behavioral Measures by School

Variable	School							
	A	B	C	D	E	F	G	H
Unobtrusiveness:								
$\bar{X}$	4.0	4.0	4.0	4.1	4.1	3.8	3.9	4.0
S.D.	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6
Scold:								
$\bar{X}$	5.0	6.3	5.8	5.0	4.8	6.3	6.2	5.5
S.D.	3.1	3.4	3.7	2.9	3.2	3.5	3.4	3.4
% students with 1 or more disciplinary referrals	19.8	41.9	33.0	4.5	26.2	33.4	45.6	35.5
Self-reported delinquency:								
$\bar{X}$	23.4	23.3	24.1	22.7	20.8	25.6	25.4	22.8
S.D.	9.3	9.3	10.1	9.1	7.3	10.5	10.0	8.5

Table 5 .

Summary Table for Regression of Unobtrusiveness

Variable	Multiple R	R^2	R^2 Change	F[e]	% of Explained Variance
Sex[a]	.1292	.0167	.0167	27.83**	5.2
Race[b]	.1742	.0303	.0136	4.53**	4.2
Ed. Fam. Hd.	.1836	.0337	.0034	5.67*	1.1
Personality Subtype[c]	.3850	.1482	.1145	23.86**	35.6
Soc. Mal.	.5070	.2571	.1089	181.50**	33.9
Fam. Com. & Sup.	.5307	.2816	.0245	40.83**	7.6
CTBS: Fall Av.	.5328	.2839	.0023	3.83	n.s.
QSL	.5650	.3192	.0353	58.83**	11.0
School[d]	.5669	.3214	.0022	0.52	n.s.

Note: The F's are based on the hierarchical decomposition method, i.e., the variables are tested in an assumed causal sequence. Any shared variance among variables is assigned to the prior variable in the hierarchy.

a,b,c,d These variables are dummy variables with k = 1, 5, 8, 7.

[e] $F = R^2$ change/k ÷ $(1-R^2_{total})$/N-k-1; N = 1107.

* $p \leq .05$.

** $p \leq .01$.

Table 6

Summary Table for Regression of Scold Scale

Variable	Multiple R	R^2	R^2 Change	F[e]	% of Explained Variance
Sex[a]	.1761	.0310	.0310	51.68**	9.7
Race[b]	.1957	.0383	.0073	2.43*	2.3
Ed. Fam. Hd.	.2144	.0460	.0077	12.83**	2.4
Personality Subytpe[c]	.3572	.1276	.0816	17.00**	25.5
Soc. Mal.	.4429	.1961	.0685	114.17**	21.4
Fam. Com. & Sup.	.4710	.2218	.0257	42.83**	8.0
CTBS: Fall Av.	.4975	.2476	.0258	43.00**	8.1
QSL	.5525	.3052	.0576	6.00**	18.0
School[d]	.5658	.3202	.0150	3.57**	4.7

Note. The F's are based on the hierarchical decomposition method, i.e., the variables are tested in an assumed causal sequence. Any shared variance among variables is assigned to the prior variable in the hierarchy.

a,b,c,d These variables are dummy variables with k = 1, 5, 8, 7.

e $F = R^2$ change/k ÷ $(1-R^2_{total})$/N-k-1; N = 1107.

* $p \leq .05$.

** $p \leq .01$.

Table 7

Summary Table for Regression of Disciplinary Referrals

Variable	Multiple R	R^2	R^2 Change	F[e]	% of Explained Variance
Sex[a]	.0345	.0012	.0012	1.50	n.s.
Race[b]	.1522	.0232	.0220	5.50**	15.4
Ed. Fam. Hd.	.1837	.0337	.0105	13.12**	7.3
Personality Subtype[c]	.2538	.0644	.0307	4.80**	21.4
Soc. Mal.	.2746	.0754	.0110	13.75**	7.7
Fam. Com. & Sup.	.2793	.0780	.0026	3.25	n.s.
CTBS: Fall Av.	.3218	.1035	.0255	31.88**	17.8
QSL	.3292	.1084	.0049	6.12*	3.4
School[d]	.3786	.1433	.0349	6.23**	24.4

Note. The F's are based on the hierarchical decomposition method, i.e., the variables are tested in an assumed causal sequence. Any shared variance among variables is assigned to the prior variable in the hierarchy.

a,b,c,d These variables are dummy variables with k = 1, 5, 8, 7.

e $F = R^2$ change/k ÷ $(1-R^2_{total})$/N-k-1; N = 1107.

* $p \leq .05$.

** $p \leq .01$.

Table 8

Summary Table for Regression on Self-Reported Delinquency

Variable	Multiple R	R^2	R^2 Change	F^e	% of Explained Variance
Sex[a]	.2170	.0471	.0471	78.50**	12.6
Race[b]	.2606	.0679	.0208	6.93**	5.5
Ed. Fam. Hd.	.2690	.0724	.0045	7.50**	1.2
Personality Subtype[c]	.4652	.2164	.1440	30.00**	38.4
Soc. Mal.	.5657	.3200	.1036	172.67**	27.7
Fam. Com. & Sup.	.5920	.3504	.0304	50.67**	8.1
CTBS: Fall Av.	.5933	.3520	.0016	2.67	n.s.
QSL	.6050	.3661	.0141	23.50**	3.8
School[d]	.6121	.3746	.0085	2.02*	2.3

Note. The F's are based on the hierarchical decomposition method, i.e., the variables are tested in an assumed causal sequence. Any shared variance among variables is assigned to the prior variable in the hierarchy.

[a,b,c,d] These variables are dummy variables with k = 1, 5, 8, 7.

[e] $F = R^2$ change/k ÷ $(1-R^2_{total})$/N-k-1; N = 1107.

* $p \leq .05$.

** $p \leq .01$.